

DOCUMENT RESUME

ED 122 383

88

EA 008 174

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 TITLE The Development of Project Information Packages for the Dissemination of Effective Educational Programs.
 SPONS AGENCY Office of Education (DHEW), Washington, D.C.
 PUB DATE Apr 76
 NOTE 25p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, California, April 19-23, 1976). Related documents are EA 008 150-152, and EA 008 301
 EDRS PRICE MF-\$0.83 HC-\$1.67 Plus Postage
 DESCRIPTORS *Administrator Role; Change Strategies; *Compensatory Education Programs; Disadvantaged Youth; Educational Change; Elementary Education; Federal Aid; Field Studies; *Information Dissemination; Merchandise Information; Motivation; *Program Evaluation; *Remedial Instruction
 IDENTIFIERS Elementary Secondary Education Act Title III; ESEA Title III; PIPs; *Project Information Packages

ABSTRACT

The dissemination to schools of information about effective projects has been inadequate to bring about widespread replications. The purpose of this research was to test the feasibility of Project Information Packages (PIPs) as a means of widespread dissemination of effective programs. The study assumed that a project could be packaged with sufficient details of project management and instruction, and explored the ease with which a dissemination mechanism could replicate a packaged project. Criteria for selecting projects for packaging were developed, and more than 2,000 projects were reviewed in attempts to identify eight that were successful in teaching reading and math to underachieving children. Only six projects could be identified that clearly evidenced educational and statistical effectiveness. Project information packages were developed for each, and in the following year they were field-tested in 56 schools across the country. Deficiencies in the packages were identified, and recommendations for revisions were made. The field test demonstrated that PIPs have been fairly successful in effecting accurate replication of the exemplary projects. (Author/NLF)

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The Development of Project Information Packages
for the Dissemination of
Effective Educational Programs

by

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Presented to the

American Educational Research Association

1976 Annual Meeting
San Francisco, California
April 19-23, 1976
Section 11.14

EA 008 174

SUMMARY

This paper summarizes three years of a research effort to test the feasibility of Project Information Packages as a means of disseminating effective school projects. The identification of effective school projects in reading and math, the packaging of these projects for dissemination, and revisions of the packages as a result of a field test are described.

The U.S. Office of Education has long felt that the effectiveness of federally funded programs--particularly those intended to provide services to underachieving children from low-income areas--could be greatly enhanced through the diffusion of educational programs and practices proven to be effective. It became clear however, that the simple dissemination of information about effective projects and practices was not a sufficient mechanism for bringing about widespread replication. For this reason USOE decided to attempt a more complete packaging of several exemplary projects. The purpose was to determine whether projects could be packaged with sufficient detail to encourage and enable their replication at sites where educational needs had not been adequately met by existing instructional programs.

In June 1973 a 12-month research and development contract was awarded to RMC Research Corporation by the U.S. Office of Education to identify up to eight successful reading and mathematics projects serving underachieving pupils from low-income areas and to develop Project Information Packages. The following year (1974-75), the packages were field tested in 56 schools across the country and suggestions for revisions were made.* Revisions are currently being made. USOE is developing a strategy for wider dissemination of the revised packages and the field test is continuing during the 1975-76 school year.

Four major tasks were involved in the first year development of Project Information Packages. They were: (a) development of criteria for choosing reading and math programs (b) design of a project model and specification of the kinds of information a Project Information Package should contain and what the media should be, (c) choice of up to eight compensatory education projects for packaging and development of project models for them, and (d) preparation of Project Information Packages for the selected projects. A description of the entire contract effort is presented in a report by Tallmadge (1974).

Some 2,000 projects were considered at least superficially as potential candidates for packaging. Initial screening reduced this number to 136, and adequate information could be obtained for only 103 of these

* See Starns, 1976 for a detailed description of the field test of the PIPs.

candidates. In-depth analysis led to rejection of 97 of the candidates, with inadequate evidence of effectiveness accounting for 54% of them (Foat, 1974). Descriptions of the criteria and the validation procedure are reported extensively in Horst and Tallmadge (1974).

Although every effort was made to find more, only six projects could be found which met all of the selection criteria.

1. Project Catch-Up, Newport Beach, California.
Reading and math, grades K-6
2. Project Conquest, East St. Louis, Illinois.
Reading, grades 1 (repeaters)-6
3. Programed Tutorial Reading, Davis County, Utah.
Reading, grade 1
4. Intensive Reading Instructional Teams, Hartford, Connecticut.
Reading, grade 3
5. High Intensity Tutoring, Highland Park, Michigan.
Reading and math, grades 6 and 7
6. Project R-3, San Jose, California.
Reading and math, grades 7-9

The packages developed for the six projects were designed as complete how-to-do-it kits and comprised nine components: Starter Set, Planning; Project Management Directory; Project Management Displays; Staff Qualifications and Preparation Set; Starter Set, Implementation; Classroom Management Directory; Student Relationships Album; Professional Relationships Guide; and Hardware/Software Packet. These are described fully in Piestrup (1974). Portions of the various components were designed to provide specific guidance to the project director, project teachers, aides, and others concerned with planning, installing, and managing the adopted exemplary model. In addition, an Analysis and Selection Kit (ASK) was prepared to assist school districts in assessing their specific needs and choosing the most appropriate model for replication.

Early in fiscal year 1974, planning was initiated with USOE for a field tryout of the Project Information Packages. Proposals from school districts interested in adopting one of the six projects were solicited in spring of 1974, and grants were awarded to 19 sites in June.

The purpose of the on-going field tryout is twofold. The first objective is to determine whether, or to what extent, Project Information Packages can serve as a means for disseminating exemplary educational

practices. The second objective, assuming that the first is met, is to identify deficiencies in the packages and make appropriate revisions before more general distribution is undertaken.

To achieve these objectives, USOE's Office of Planning, Budgeting, and Evaluation awarded a contract to the Stanford Research Institute (SRI) of Menlo Park, California, to conduct both a process and outcome evaluation of the field tryout. RMC Research Corporation is working with SRI during the two years of the evaluation study. A report summarizing the first year's field tryout results and recommended revisions was published in the fall of 1975 (Horst, Piestrup, Foat and Binkley).

RMC is currently revising the six packaged programs based on the 1974-75 field test results. Complete packages will be available for adoption during the spring of 1976. A revised Analysis and Selection Kit (ASK) has been available since fall 1975.

I. FIRST-YEAR STUDY

The overall objective of the 1973-74 research and development contract was to identify effective approaches for educating low-income, underachieving children and package them in such a way as to facilitate their adoption by schools where current practices were less successful. The first task was "to develop criteria for choosing operational approaches to compensatory education worthy of more widespread use and amenable to installation in other schools."

Development of the project selection criteria began immediately upon contract award. The initially established criteria required substantial modification during the early months of the contract period, however. The final set of criteria used to identify effective programs was as follows:

Relevance. Projects serving underachieving children from low income areas in grades K through 12 aimed at producing cognitive achievement benefits in reading and/or math.

Availability. Ability of investigators to obtain enough information to validate the project's success and analyze it in sufficient depth.

Accessibility. Documentation of procedures, results, and costs available; personnel cooperative; can be visited for validation.

Acceptability. Conformity to Office of Education policy on dissemination; operation in public schools; not primarily a single, commercial product.

Cost. Recurring costs under \$400 per pupil (subsequently modified to \$475) plus start-up costs not to exceed \$1,000 per pupil.

Replicability. Major components of personnel, materials, hardware, and environments can be duplicated. Development of major hardware, facilities, or training institutions not needed.

Effectiveness. At least two "instances"¹ showing evidence of educationally and statistically significant effects on achievement.

Educational significance. Achievement gains at least one-third of a standard deviation greater than expectations based on national norms or control-group scores.

Statistical significance. No more than one chance in 20 ($p < .05$) that the observed gains could be due to chance.

¹ An instance, here, may be defined as a single-group evaluation. More than one such instance must have shown positive results before a project would be considered.

Support by USOE funds. The project must be, or previously have been, the recipient of funds from USOE through ESEA Title I, Title III, Right-to-Read or other program.

Conformance with federal regulations. Operation of the project must be in conformance with the pertinent program regulations and performance criteria.

Assuming that a sufficient number of projects could be found which met all of the above criteria, consideration would also be given to:

Variety. Difference in instructional strategy, breadth of target population served, subject-matter focus, etc.

Finally, Bilingual programs, Follow-Through programs, and programs sponsored by the Bureau of Indian Affairs were specifically excluded from the study.

Concurrently with the development of project-selection criteria and validation procedures, the search for successful projects began (Task 2). Several lists of projects which one study or another had labeled as exemplary were provided by the USOE project officer. The expectation, however, was that one list of 23 projects which had been assembled from other sources and based on what was judged to be particularly convincing evidence would provide up to eight projects which would stand up under the scrutiny of the validation procedure. This expectation, too, proved unfounded.

Examination of all of the projects on all of the lists did not yield eight which met the established criteria. Additional nominations were obtained from State Departments of Education, from USOE program offices, from consultants who participated in other phases of the study, and through personal professional contacts of members of the RMC staff. After seven months, further searching was abandoned. Only the six projects listed below could be found which satisfied the selection criteria.

1. Project Catch-Up, Newport Beach, California.
Reading and math, grades K-6.
2. Project Conquest, East St. Louis, Illinois.
Reading, grades 1 (repeaters)-6.
3. Programed Tutorial Reading, Davis County, Utah.
Reading, grade 1.
4. Intensive Reading Instructional Teams, Hartford, Connecticut.
Reading, grade 3.
5. High Intensity Tutoring, Highland Park, Michigan.
Reading and math, grades 6 and 7.
6. Project R-3, San Jose, California.
Reading and math, grades 7-9.

The Original Project Information Packages

Preliminary planning for packaging was done very early in the study. The development of a model design, however, began in earnest as soon as the first exemplary project was identified. Considering the information adopters would need in order to replicate key project features was particularly fruitful.

It was necessary to prepare detailed specifications for each of the projects selected for packaging. These specifications, called project models, were organized in accordance with the model design referred to above but included detailed information about the content, emphasis, and method of presentation to be reflected in the final package components. While the first two packages were developed without formal project models, such models were prepared and used for the four remaining projects.

The packages themselves have nine components, four for planning and five for implementing each project. The components included:

1. Starter Set: Planning. Provided orientation to project, public relations material, and introduction to the package for the project director. Also provided information for school boards, principals, regular school staff, potential school staff, and parents, in order to inform them and elicit their support. Included a filmstrip with cassette tape, handout brochure, project director's orientation booklet (with cassette tape for some projects), and viewfoils.
2. Project Management Directory. Provided detailed guidelines and support materials needed to plan and implement the project for project management personnel. It included a Project Management Calendar and supplementary sections on the major management tasks.
3. Project Management Displays. Provided time schedule overview, summarized component use, and displayed component use and time schedule to visitors. It included a Major Management Tasks Chart, and Project Information Package Use displays.
4. Staff Qualifications and Preparation Set. Provided personnel-selection guidelines for director and self-evaluation and self-training materials for the staff. Included a Staff Qualifications Checklist and In-service Training Topics.
5. Starter Set: Implementation. Helped classroom personnel in starting each type of activity (testing, teaching, other) including setting up environment for the first time. Included an Implementation Starter Booklet and Original Art File.

6. Classroom Management Directory. Provided detailed guidelines for all classroom procedures and samples of materials needed for administration of the project such as forms, notices, and letters for project classroom personnel. Included a Teaching Staff Guide (e.g., a calendar and support materials).
7. Student Relationships Album. For the project staff interacting with children, this album conveyed the project environment, from the child's viewpoint, which staff is expected to create, (e.g., how he should perceive staff), what learning climate he should experience (high pressure, self-directed, etc.). It also distinguished roles of different staff members in creating the environment and described desired student responses (e.g., confident, competent, happy, eager) and gave anecdotes.
8. Professional Relationships Guide. Defined for all project staff (plus the school principal) their roles in relation to all school staff (project and non-project) with whom they interact. Attempted to anticipate and reduce staff conflicts.
9. Hardware/Software Packet. Aided project director and teaching staff in selection and ordering of commercial hardware/software and describes core and supplementary items. Conveys to the teaching staff the experience of original project staff plus modifications made (if any). Included Factsheets and manufacturers' brochures for core items selected by project staff and supplementary materials.

The second year of the packaging effort (1974-75) involved the dissemination of the six packages to school districts for extensive field testing and recommendations for revision.

II. SECOND YEAR STUDY

The two-year evaluation of the Project Information Package tryout is the second step in answering the question of packaging viability. The field test consists of attempts to replicate the six projects, at two to five sites each, a total of 19 replications in all. The evaluation of the field test is being conducted by SRI with RMC as a sub-contractor. The first year of the evaluation included visits to each site to observe progress and collect student test data. RMC participated in these site visits and provided general support as requested, but was primarily responsible for developing recommendations for package revisions. RMC's role in the second year of evaluation entails actual revision to the original Project Information Packages based on the field test.

The original intent of the field test was to determine experimentally whether the six prototype packages were effective mechanisms for replicating the six exemplary projects, and to identify what modifications, if any, they required. However, as the field test progressed, it became clear that the questions of real interest were (a) What kind of a dissemination system would result in the replication of successful projects in new locations? (b) What role would an information package play in such a system? and (c) What should be in the package? The first two questions are addressed at length in Stearns (1975). The primary focus of this paper is the package per se and, in particular, the revisions in content and format required to maximize the utility of the packages within the expected replication system.

Packaging Considerations

The general conclusion of the first year of the field test was that the Project Information Packages have been fairly successful in guiding accurate replication of the exemplary projects. This might be taken as an indication that an adequate revision would consist largely of design and editorial improvements. In fact, however, it appeared that design and editorial considerations were of secondary importance. Looking back at the development year and ahead at revisions, the most critical considerations were: (a) the selection of successful projects to package, (b) the analysis of the factors which constitute the successful projects, and (c) the analysis of the information needs of a replicating site. While the appearance and style of the package materials can certainly encourage and facilitate their use, they can do little else to ensure the establishment of a project that would result in student achievement gains.

The first consideration is related to the problem of finding dramatically effective projects suitable for replication. After eight months of intensive searching of hundreds of projects, the RMC staff

is convinced that there is, at the very most, a handful of compensatory reading or math projects that clearly and dramatically raise student achievement levels. It certainly appears that no existing project can raise achievement score distributions of underachieving students in low-income areas to the level typical of middle-class schools.

The second consideration in producing a satisfactory package is the analysis of the developer site activities and features. A thorough discussion of this consideration can be found in Stearns (1975), but two points should be reiterated here. The first is that no rigorous analytical procedures are available for analyzing projects. An analysis can be made only by an individual knowledgeable in the factors affecting learning, who compares a variety of successful and unsuccessful projects.

The second point is that the developer project site personnel, even those most responsible for the success of the projects, may not be aware of the factors which make their projects work. While it might seem that the developer site project director should be the ultimate authority on the important features of the project, the field test has demonstrated that this is not always so. The successful identification of these features rests largely on the skill and experience of the packaging team.

The final consideration in developing a satisfactory package is the analysis of the information needs of a replicating site. This problem includes the design of the entire replication mechanism and involves determining the persons who need information, the information they need, and the time when they need it. Unlike the analysis of the effective projects, the analysis of information needs is, in principle, amenable to systematic development. The field test has provided an unusual opportunity to study these needs and to elaborate a model of the dissemination process in which they are incorporated (Horst et al., 1975).

Processing the Field Test Data

From the beginning of the field test, RMC rapidly accumulated data from a variety of sources, mostly during site visits. Additional information was obtained from contact report forms submitted to SRI by replicating sites, exemplary sites, USOE, and SRI/RMC whenever a replicating site sought or received assistance from an outside source. It has been RMC's task to process these data to identify needed revisions.

The field test data made it apparent that the replication mechanism was effective to some degree. Despite starting months later than the packages prescribed, personnel were hired, facilities allocated, materials ordered, and students selected, and instruction did occur.

On the other hand, it was equally clear that in specific instances projects were not being replicated exactly as intended. Problems varied from project to project, and within projects from site to site. They included everything from difficulties in obtaining qualified staff and in ordering materials to using unspecified instructional approaches.

The reasons for problems encountered by sites fall into three categories: (a) information in the project was unclear, ambiguous, or inadequately emphasized; (b) the process recommended for accomplishing a task was inadequate (or on some points there were no suggestions at all); or (c) the initial conditions assumed in the package did not exist. Obviously, the three categories are not independent. For example, where the package assumes the availability of highly skilled personnel, relatively brief explanations of tasks are provided. If such personnel are unavailable at a given site, the materials may prove inadequate. If the assumption of available classroom space is not met, then the process for arranging for space cannot be followed.

In some cases, revision trade-offs are possible. Assumptions about pre-existing conditions can be relaxed and supplementary materials added. Thus, less experienced personnel may prove successful if they are provided with more support and training materials, but clearly there are limits to such trade-offs. No amount of packaged materials can produce a dynamic administrator or skilled teacher overnight and, while money can buy additional space, information by itself cannot create classrooms.

Results

Three central themes and their relevance to recommendations for revisions in Project Information Packages are: (a) the motivational issues in replicating a compensatory education project developed outside of the replicating district; (b) the timing and scheduling of the replication effort; and (c) the importance of the project director in the replication mechanism. Following the discussion of these three themes, we deal with several additional themes more briefly and list the specific concepts which proved most difficult to convey.

Motivation for Replication

Perhaps the most basic issue in developing a dissemination mechanism concerns the reasons that anyone would want to replicate a project developed by someone else. The reasons, as originally viewed by USOE, seemed obvious and straightforward. The evidence is clear that very few schools have developed compensatory-education projects that have proved impressively effective. Thus, it seemed likely that many less successful schools would want the chance to replicate a project that embodied the secrets of success.

As RMC interacted with a variety of school personnel, it became apparent that this view was quite naive. It had seemed obvious to the RMC staff members that the development of a successful project is, technically, an exceedingly difficult task, that very few schools have been able to develop such projects, and that the most rigorous evaluation of achievement gains is a critical step in demonstrating effectiveness. However, it appeared that this orientation was not widely held among applied educators and, in fact, was totally alien to many. Instead, a more common philosophy appeared to be that a professional educator is capable of identifying a successful project when he or she sees it and, furthermore, is able to choose selectively those ideas which will be helpful in his own school.

In the field test of the Project Information Packages, this discrepancy in viewpoints has had a major impact. The materials were written with the idea that a site would be looking for complete information about what the developer site had done so that the new site could learn all of the approaches and emphases that made the project effective and could replicate the exemplary project as faithfully as possible. Actually, replicating sites have tended to search the packages looking for "good ideas" and, more to the point, looking for specific requirements that they must meet as a condition of their funding grants. In fact, the major concern of some sites has been how far they will be allowed to go in changing the projects to suit their perceived needs.

Since some field-test sites differ considerably in context from the developer sites, interest in adaptation is inevitable, and this theme is discussed below. The immediate impact on the field test was, however, to raise the issue of enforced compliance with specifications given in the package. This required a rather abrupt change in the orientation of the RMC staff. For approximately a year, they had been attempting to answer the question: "Given a site similar to the developer site, what will the personnel need and wish to know in order to replicate the original project?" The new question might be phrased: "Given a site which may differ substantially from the developer site, which project features, if forced upon the site, would be sufficient to ensure effective instruction?"

While this latter question appears to RMC to be unanswerable, there do appear to be techniques for increasing the likelihood that replicating sites will be motivated to replicate accurately.

A "carrot and stick" approach by a funding agency is the most straightforward approach. The carrot in the form of funds and assistance should provide the means of replication. The stick could take the form of firm insistence (by monitors thoroughly familiar with project features) on compliance with the spirit of the projects.

Where funds and monitoring mechanisms are unavailable, it may still be possible to encourage replication. Careful selection of sites and project directors can ensure that replication will be feasible and that relevant personnel will have a positive attitude toward replication. Sites can be given adequate time to carry out the activities prescribed in the package. Finally, for concepts that were widely overlooked or ignored in the field test, package materials should incorporate a heavy emphasis on convincing the replicators. The motivation and rationale for the project approach should be carefully presented, and the consequences of ignoring the approach, illustrated by anonymous examples from the field test, should be explained.

Timing and Scheduling

The basic activities of start-up are obtaining and training staff, obtaining materials and facilities, arranging for student scheduling, and eliciting support for the project. The packages are designed to have these occur the spring before the first school year when students are taught. In the field test, staff began in mid- or late summer. This late start resulted in problems in all start-up activities at virtually every site. Success in dealing with the problems has varied according to the nature of the problem, the project, and the particular site.

Perhaps the major problems lie in obtaining appropriate staff and materials. Several sites have had to settle for inexperienced project directors or teachers because experienced personnel were already committed. This problem is difficult to correct because, once hired, inappropriate staff are difficult to replace. It is clear this may have a permanent impact on the project.

Problems with ordering materials are relatively straightforward. The major requirements are for current information on what to order and enough lead time so that materials can arrive and teachers can familiarize themselves with the materials before school starts. The arrival of certain materials before school starts is critical to appropriate instruction in most projects. If substitutions are made for basic materials, the character of the projects could be entirely different.

Allocation of facilities is more complicated since commitments are usually made in the spring or summer. Scheduling of students is closely related since, like allocation of facilities, it is usually handled by the school principals and is fixed in spring or early summer. Most sites were able to provide some sort of solution to these problems, but in some cases the last-minute reallocation of facilities and the reshuffling of schedules aroused lasting hostility at the sites.

Project Director

The final major theme to be developed here is the critical role of the project director. In every project, the project director is the administrative driving force that must make the project work. At the developer sites in four of the six effective projects, the project director also plays an active professional role in the operation of the project. Without a highly motivated and dynamic project director, there is little reason to expect that any of the projects can succeed.

The need for qualified project directors has figured in all the development of the packaging activity. The general solution, as conceived by RMC, is to select the best project director available as part of the selection/adoption stage, and to provide him or her with a maximum of support in the package. Due to the time schedule for the field test, very little input to the selection of project directors was possible; the test-site project directors are, in general, one or more steps down the administrative ladder relative to project directors in the developer sites. In some sites, a combination of enthusiasm, talent, and inputs from the package has produced remarkably good results; but in others, the lack of experience for the project directors has reduced the success of the projects.

To a large extent, district-level officers, much like the developer site project directors, were responsible for obtaining the grants. However, rather than operating the projects themselves, they have assigned the title of project director to a person at a lower level (e.g., a local reading coordinator). This has created administrative structures quite different from the developer sites, where the administrative authority and operational responsibility resided in a single person. In many of the replicating sites, the project director has the operational responsibility while much of the authority appears to remain in the hands of the district officer who obtained the grant.

The problem of authority structure was aggravated in the field test by time problems. Some of the project directors were new to administrative positions and would have benefited, no doubt, from the time to assimilate their new responsibilities and from the mechanisms built into the packages to establish their authority (e.g., project directors are supposed to hire the remaining staff, but in the field test this was often done by the district officer who obtained the grant before the project director was hired).

From the beginning, RMC has viewed the selection of an appropriate project director and the establishment of an appropriate role for the project director as central to successful project operation. As data have been collected during the field test, this view has been clearly substantiated, although the unexpected ability of inexperienced administrators to set up a successful project with the aid of a Project Information Packaging has also been encouraging.

Other Themes

The impact of the SRI/RMC evaluation is hard to measure, but has clearly been a factor in the replication. Many tasks have been initiated or completed to coincide with SRI/RMC site visits. In several cases, the first involvement of the project director was during the August 1974 site visit. There may be cases where tasks were rushed unnecessarily to meet a site visit deadline.

The need for technical assistance is clearly a function of the skills of the staff and the similarity of the replicating site to the developer site. However, even where sites are doing very well, there appears to be a felt need for reassurance on occasion. It also appears that reliance on the developer site for technical assistance will not be satisfactory. The developer sites are not experts on the start-up process because they did not develop the projects on the same time scale. Furthermore, projects and project directors change at the developer sites, and even the original project directors may not understand the problems faced by a site in a different context. In any case, if more than a few sites were to replicate in any one year, the consulting load on the developer site would be excessive.

Package Revisions

Assumptions and Issues

To be fully effective, materials for use in any dissemination effort must be carefully tailored to the exact processes that will actually operate. The specifications described in this section are intended to reflect both the experience gained from the field-test and the RMC understanding of the mechanisms that may be established in succeeding years. The following key assumptions affect the specifications in major ways:

Ability to replicate.

Project Information Packages are not projects. They are simply packages of information about projects and provide neither the resources nor the attitudes that the projects require. In designing a package, it must be assumed that any site attempting to use the information to replicate a project will have access to the necessary building blocks. In general, these include the availability of a qualified project director, appropriate staff, funds to pay these personnel and purchase materials, and basic facilities required for the project. The ability to replicate also requires a supportive school district environment, where the principles of the project are acceptable and the acquisition of appropriate staff and materials is facilitated.

To some extent, it is possible to compensate for deficiencies in the experience of personnel. In particular, it has been found in

the field test that a talented and enthusiastic project director can make up for a lack of administrative experience by relying on guidance in the package. Similarly, talented teachers learn new approaches and techniques readily. Revised materials should provide these inexperienced but talented personnel with the additional information they need to acquire the new skills quickly. But in general, a package can only describe the required context and resources. It cannot supply them.

Motivation to Replicate

Given an appropriate context with the required personnel and material resources, it must still be assumed that a site has some motivation to replicate a project. During the initial package development process, it was assumed that the opportunity to install a uniquely successful project would provide the incentive to follow the procedures of the originating projects as closely as possible. This has not proved to be true, since professional educators do not generally perceive project success as being extraordinarily unique or difficult to achieve and are inclined to trust their own judgments on specific details rather than following instructions to the letter.

The field test involved a much more tangible incentive in the form of money; that is, careful adherence to instructions in the package was a condition of the field-test grants. This process was quite effective in getting sites to follow the instructions, even in cases where procedures were initially perceived as arbitrary or undesirable by the replicating staff. It is interesting to note that, in several instances where sites initiated such procedures grudgingly, the procedures proved their worth and the attitudes of site personnel toward them became increasingly positive. In any case, it now appears unlikely that large-scale funding will be a continuing part of the replication mechanism and any "enforcement" of procedures by any agency appears unlikely. It must be assumed, then, that the basic motivation to follow the procedures specified in the packages will have to be generated by the materials themselves.

Timing of the Replication Process

A basic motivation for the package development effort has been the perceived desirability of establishing new, successful projects in a short time. All existing packages are based on schedules that will have the projects reasonably operational when school opens in the fall. To meet this schedule, most projects require extensive start-up activities during the preceding spring and summer. The costs of start-up include staff time and the materials to equip project rooms. These costs may run from a few thousand dollars up to twenty or thirty thousand dollars, depending on the nature and size of the project.

The specifications in the package assume that the associated funding problems are manageable. If, due to budgetary considerations, materials ordering and other start-up activities must be delayed until July or later, the package mechanism will not be suitable for most projects. Compensating for the lack of spring start-up is not simply a matter of slipping the September start date by a few months. In general, the required teachers and other resources have already been committed to other projects by the end of spring term and are simply unavailable.

This is not to say that a package using a different time scale would be either less useful or more difficult to design. Packages designed to permit start-up over a period of one to two years would be quite possible. They should also fill a very real need, especially in schools which have in the past been unable to develop effective projects on any time scale. It should also be noted that the current packages represent, in a sense, evolutionary approaches requiring several years for complete development, since only rather small configurations are recommended for the first year of most projects. Nevertheless, the current mechanism is based on a one-year timeline, from awareness to operations, and the utility of the materials recommended rests on the assumption that funds will be available for spring start-up.

Two other issues must be discussed briefly. The first concerns the amount of technical assistance needed by a site to replicate a project. In some cases, package materials recommend specific kinds of technical assistance and describe how the assistance can be obtained. In most field-test sites, project directors and teachers felt a need for moral support and wanted to see the developer sites or talk to the developer project director. However, it did not appear that replicators needed contact with the developer project to replicate accurately, or that the developer project director was the best source, when information was needed. For these reasons, the specifications for revised materials are still based on the assumption that replicators will not have access to the developer sites.

A final and especially critical issue concerns the relation of a replication project to existing projects in the district. In the field test, package-guided projects have been used to fill in areas of need which no preexisting projects addressed. An alternative use which now appears likely is the use of a package-guided project to replace an existing project. This possibility has profound implications for the viability of the package concept, especially where the only hope for the success of the selected project involves releasing established personnel and hire a new project director and staff. The practical and political problems of such an attempt should be obvious, and there appears to be a definite possibility that sites will

try to use the new projects in this way. The problem of using inappropriate existing staff or facilities in the new projects should be addressed in the ASK so that it will arise as seldom as possible in practice. Beyond that, however, methods for dealing with this problem are beyond the scope of the package's materials.

Revision Principles

In addition to the above issues and assumptions, there are several general revision principles that apply to all Project Information Packages. The first involves changing the materials from a process orientation to an outcome orientation. This change is recommended as a result of the persisting confusion over the issue of the "essential features" of each project. In the prototype packages, the project features were presented by describing project resources and explaining processes for using the resources. Given this approach, the task of defining exactly which features were "essential" and which were "flexible" was impossible for two reasons. On the one hand, there are always several ways of doing anything and, in some instances, the developer site may have chosen a particular approach rather arbitrarily. On the other hand, the approach used by the developer site may have been developed to capitalize on a unique situation and might have had very different results in a slightly different setting. Clearly, the outcomes, not the procedures, were essential, and the revised packages should make these outcomes completely clear.

The identification of these outcomes is still a judgmental process which depends on the insight of the personnel who analyze the project at the developer site. However, most of the essential outcomes are fairly obvious, broad, and noncontroversial (e.g., regular classroom teachers support the project and release students willingly; project teachers know each student's needs and provide suitable instruction).

This is not to say that developer project procedures are unimportant. To a large extent it is the development of workable procedures rather than the setting of unusual goals that distinguishes successful projects. Therefore, an approach of convincing replicators of the value of project procedures is the second major revision principle. This principle derives from the assumption discussed above that there will be no monetary incentives to replicate accurately. In the field-test sites, procedures were followed initially because doing so was a condition of the grants and, since most of the procedures proved to be unusually effective, it is reasonable to hope that these procedures will be continued. In lieu of such incentives it will be necessary to convince replicators that specified procedures, while possibly requiring some site-specific adaptation, are basically practical and effective, and further, that commonly tried alternative procedures are likely to fail. Without the experience of the field test this

have been impossible. However, a considerable amount of information has been gained from the field test on the features that sites will tend to modify and, in many cases, on the consequences of such modification.

A third revision principle concerns the physical organization of package materials. In the prototype packages, all the materials were packaged in a single large box and, within the box, were divided among 10 drawers on the basis of content. Only a single copy of each item was included in the box. This arrangement assumed that certain items would be shared among the project staff. Other items such as the teachers' manuals, which were clearly required in multiple copies, had to be prepared separately for shipping.

In the field test, the expected practice of sharing items did not work out, and it quickly became apparent that each person who needs access to a particular item should have his or her own copy. As materials were completed, it also became clear that the multidrawer boxes were unnecessarily bulky, and that incorporating the content of various booklets as sections or chapters of the major manuals would result in a much more compact and usable package. Therefore, it is recommended that the revised packages should be organized by type of personnel, with all required items packaged together for shipping. In practice, this will usually mean that one package of project director's materials and several packages of teachers' materials would be ordered by each site. For some projects, additional packages will be required for principals or other special personnel. The contents of each package are discussed below.

A fourth revision principle is the addition of information on training and instruction. There will also be extensive revision or expansion of every section of the packages to eliminate specific sources of confusion encountered by field-test sites, but the major modification will be the creation of essentially new materials on pre- and in-service training, and on instructional techniques. In keeping with the original conception of Project Information Packages as information packages, very little in the way of training material was provided in the prototypes for either project directors or teachers. Thus, while project directors were told what training topics to cover with project teachers, they were not told how to conduct the training. Similarly, teachers were provided with descriptions of the kinds of instruction they were expected to provide, but it was left to the project director or to their own skills to organize the instructional program. This approach mirrored the development of the developer project and was reasonably successful in a few of the field-test sites. In general, it was clear that additional materials would be required for the project directors if a satisfactory preservice workshop were to

be conducted, and that teachers could establish appropriate instructional techniques more quickly and with much more confidence if they were given detailed guidelines on how to proceed.

A fifth and final revision principle is the addition of the funding agencies and potential project monitors or consultants as integral parts of the dissemination mechanism. This revision of the mechanism generates a corresponding need to provide information and materials that may help the various officials contribute to the success of the replication process. While this critical component of the mechanism is still in a state of flux, it is possible to identify desirable inputs from relevant agencies and to provide the materials that would enable them to make such inputs. It is understood that as the dissemination mechanisms evolve, these materials should be adapted to fit new requirements.

Recommended Materials for the Revised Project Information Package Replication Mechanism

The various manuals, brochures, and other materials now recommended for use in the replication mechanism are listed in Table 1 and are discussed in Horst et al. (1975).

Materials are grouped in Table 1 into adoption/selection items and start-up/operation items. This grouping is determined by the initial point in the replication mechanism at which materials are expected to be used. Most of the selection/adoption items will continue to be used during start-up and operation.

Revised Selection/Adoption materials are now available for school districts and state dissemination officers. Start-up/Operation materials will be ready in time for the 1976-77 school year.

Table 1

RECOMMENDED MATERIALS FOR THE REVISED
PROJECT INFORMATION PACKAGE
REPLICATION MECHANISM

Selection/Adoption Materials

Analysis and Selection Kit (ASK)

1. Overview brochure
2. Project Selection Guide
3. Project description booklets (6)
4. Criteria checklists (6)

Project Orientation and Project Information Package Application Materials

5. Presenting Project X (guide)
6. Filmstrip/cassette tape
7. One-page handout description
8. Illustrated brochure
9. Poster
10. Applying for a Project Information Package
11. Budgeting Worksheets

Funding Agency Materials

12. Disseminating agency manuals
13. Applying for a Project Information Package (model)

Start-Up/Operation Materials

Project Director's Materials

14. Project Management Directory (with Evaluation Manual)
15. Materials/Equipment Package
16. Project Management Calendar
17. Orientation/public relations package
18. Training Manual
19. Training videotape
20. Tape/slides skill training kit (PTR only)

Teacher's Materials

21. Teacher's Manual
22. Project-developed materials (Materials/Equipment Package)

Materials for Other Personnel

23. Conquest counselor's manual
24. Conquest nurse's manual
25. PTR principal's manual

Conclusions

It is the position of RMC that the current revisions to the existing Project Information Packages would be adequate to permit replication of the six packaged projects, given appropriate replicating sites. However, RMC feels that the more important question is whether a dissemination mechanism based pm packages can be developed that will actually result in dissemination of effective educational projects.

There are three basic parts to any such dissemination mechanism, and issues related to each part directly affect the revision recommendations prepared by RMC. The three basic parts are (a) identification of effective projects suitable for replication, (b) selection of sites for replication of the effective projects, and (c) provision of the motivation and resources needed to replicate the projects.

RMC believes that, at most, very few existing projects have a major impact on student achievement test scores, and that even fewer are suitable for replication. This implies that a substantial proportion of any long-range development effort should go toward identifying (or developing) projects suitable for replication and, more immediately, that the number of additional packages developed in the near future should be small. In short, the revised packages should not be seen as prototypes for a massive packaging program.

The second part of the dissemination mechanism is the selection of replicating sites. Issues affecting revisions included:

- o The mechanics of the site selection procedures envisioned by USOE.
- o The type of site in which USOE wishes to adopt projects.

These issues affect the basic design of the package since they determine the qualifications of the project directors and of other staff which, in turn, determine the level of detail and the amount of training material required in the packages. More generally, the selection procedures determine the match between the developer site and the adopter (replicating) site and, unless this match is adequate, no information package can result in an accurate replication.

The final part of the dissemination mechanism must provide the motivation and resources required by the site. The package is only the information component of the required resources and must be consistent with the following USOE determined variables:

- o Funding level
- o Enforcement/monitoring level
- o Technical assistance level
- o Timing of funding (spring or summer).

It now appears that USOE intends to play a very limited role in funding, monitoring, and assistance with regard to replication projects based on packages. While the reasons for this position are clear, it is equally clear that the impact which can be expected from any nationwide replication system is closely related to the level of federal participation.

If USOE is not supplying funds directly for such projects, the timing of funding becomes an independent issue. The packages assume enough funds to permit start-up in the spring. If such funds prove to be generally unavailable in the spring, then a quite different start-up schedule (perhaps 18 months) must be developed.

The field test has demonstrated that a package can substitute for, or supplement, more costly technical assistance. However, neither packages, technicians, nor any other information source can create the successful projects or the desire and resources to adopt them. If Project Information Packages are to play a major role in improving education in the United States, it can only be in the context of a continuing project and dissemination system development effort.

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